

REMARKS

In accordance with the foregoing, no claims have been amended herein. Therefore, claims 1 and 3-22 remain pending and under consideration. No new matter is being presented, and reconsideration and allowance of the pending claims are respectfully requested.

Rejections under 35 U.S.C. §103(a)

Claims 1, 3-13 and 15-22 stand rejected as being unpatentable over Reference 1 (Iwanaga, JP2003-0092375), Reference 2 (Yoshiki, JP08-162909), and Reference 3 (Denso Corp- JP2004-23753). Claim 14 stands rejected as being unpatentable over References 1 to 3, and further in view of Reference 4 (Chang, US2004/0192346). The rejections are respectfully traversed and reconsideration is requested. The following is a comparison between embodiments of the present invention and the cited art.

Independent claim 1 is characterized in that a judgment unit is operable to judge whether the acquired position information of the base station is stored in the storage unit; an additional recording unit is operable to, when the acquired position information is not stored, attempt to detect a receiving frequency of a broadcast station having a receiving intensity of no less than a predetermined level within a frequency range defined for an area indicated by the acquired position information, and additionally record all detected receiving frequencies of broadcast stations in correspondence with the acquired position information the storage unit; and a receiving control unit is operable to, in response to a receiving instruction from a user, read the detected receiving frequencies stored in correspondence with the acquired position information from the storage unit, and have the broadcast receiving unit receive a broadcast of a broadcast station at the read receiving frequencies.

With this structure, according to certain embodiments, when position information of a base station, for example, is not stored in correspondence with a receiving frequency of a broadcast station receivable in an area indicated by acquired position information, an attempt can be performed to detect a receiving frequency of a receivable broadcast station having a receiving intensity of no less than a predetermined level. The detected receiving frequencies of the broadcast

stations may be newly recorded in correspondence with the acquired position information. As an exemplary advantage, it is possible to receive a broadcast of the broadcast station at the registered receiving frequency, according to an embodiment recited in independent claim 1.

As a result, when a user visits an area for the first time for example, a receiving frequency of a broadcast station receivable in the area can be detected. Then, all the detected receiving frequencies of the broadcast stations may be newly recorded in a mobile telephone, for example, in correspondence with position information of the area. Accordingly, when the user visits this area again, the receiving frequencies of the broadcast stations receivable in the area have been already recorded in the mobile telephone in correspondence with the position information that indicates the area. This provides a specific advantageous effect that when the user visits the area again, the user can easily select a desired broadcast station, for example, among a plurality of broadcast stations receivable in the area, and receive a broadcast of the selected broadcast station.

The Examiner contends, on page 3 of the Action, that although Reference 1 fails to disclose elements corresponding to the “judgment unit”, the “additional recording unit”, and the “receiving control unit” of claim 1, Reference 2 discloses these features of claim 1.

Specifically, Reference 2 discloses, in paragraph [0008] of the Specification to which the Examiner refers, a terminal device having a broadcast receiving function that comprises: a position information storage unit (101) operable to store therein position information transmitted from a base station; a broadcast station selection unit (9) operable to select a broadcast station to be received; a frequency storage unit (101, 102, 103) operable to store therein one or more broadcast station frequencies with respect to position, information of each of a plurality of base stations; and a frequency searching unit (8) operable to search for a broadcast station frequency of the selected broadcast station among the one or more broadcast station frequencies stored, in the frequency storage unit, based on the position information stored in the position information storage unit and the selected broadcast station.

Reference 2 further discloses, in paragraph [0010], a reception sensitivity judgment unit (12, 8) operable to judge a reception sensitivity at the broadcast frequency searched for by the frequency

searching unit; a position information re-storage unit (101) operable to, when the reception, sensitivity is equal to or less than a predetermined reception sensitivity, re-store therein position information transmitted from the base station; a frequency re-searching unit (8) operable to re-search for a broadcast station frequency of the selected broadcast station among the one or more broadcast station frequencies stored in the frequency storage unit, based on the position information stored in the position information storage unit and the selected broadcast station; and an alignment unit (12) operable to, when the broadcast station frequency that is re-searched for is different from the broadcast station frequency that has been previously searched for, perform alignment using the broadcast station frequency that is re-searched for.

Furthermore, Reference 2 specifically discloses, on pages 37-45 of the Specification, the structure corresponding to the structure described in paragraphs [0008] and [0010]..

The structure disclosed in Reference 2 is based on the assumption that position information of a base station has been stored beforehand in the frequency storage unit. This is clear from the following description on page 36 of the Specification, for example, which states, “when the receiving frequency is low... search is performed based on a correspondence table stored in the frequency registration unit 103 (corresponding to the frequency storage unit)”.

That is, according to the structure disclosed in Reference 2, it is necessary for a manufacturer or a user of the terminal device to register position information of a base station in the frequency storage unit in correspondence with a broadcast station frequency of a broadcast station that is receivable in an area indicated by the position information.

For example, in the case where the manufacturer registers the position information, it is necessary to register beforehand, with respect to each receivable area the user can move to, position information of a base station with a receiving frequency of a broadcast station receivable in the area indicated by the position information. When a mobile terminal having a low memory capacity is used, as the terminal device generally is, the system of Reference 2 would likely cause a memory shortage.

Furthermore, the range of areas where a certain user moves around greatly differs for each user. Although there is little possibility to use data with respect to a receivable area to which the user is unlikely to move, such data needs to be registered in the memory in order to support all users. This leads to wasted memory usage, and it is impossible to efficiently use the memory.

In contrast, according to the embodiments of the present invention as recited in claim 1, the judging unit is operable to judge whether acquired position information of a base station is stored in the storage unit (which is in correspondence with receiving frequencies of broadcast stations receivable in an area indicated by the position information). When it is judged that the position information is not stored, the additional recording unit attempts to detect a receiving frequency of a broadcast station having a receiving intensity of no less than a predetermined level within a frequency range defined for an area indicated by the acquired position information. If a receiving frequency is detected, the detected receiving frequency is additionally recorded in the storage unit. Therefore, it is possible to record data with respect to only an area to which the user has actually moved. This can prevent waste of the memory without impairing the user's ability to receive a broadcast.

Therefore, it is respectfully submitted that Reference 2 fails to teach or suggest the aforementioned features of independent claim 1.

Furthermore, Reference 3 discloses, in paragraphs [0012] to [0014] of the Specification to which the Examiner refers, a history recording unit operable to record a use history of software; and a deleting unit operable to, when software acquired by an external acquisition unit is stored in a memory, partially delete software that has been stored in the memory based on the current capacity of the memory and the use history. However, Reference 3 does not disclose and suggest the foregoing features of independent claim 1, and is not cited as doing such.

Reference 4 (cited in rejecting claim 14) does not disclose and suggest elements corresponding to the aforementioned structures of claim 1, and does not cure the deficiencies of References 1-3 described above.

In conclusion, it is respectfully submitted that independent claim 1 patentably distinguishes over all of the cited references, alone or in combination. The pending dependent claims 3-22 inherit the patentability of independent claim 1 and are submitted to be allowable for at least the foregoing reasons.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no. 278542005800. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

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